

- 151. (New) The method of any of claim 147, 148, 149 or 150, wherein the human Y4 receptor has an amino acid sequence substantially identical to the amino acid sequence shown in Figure 1 (SEQ ID NO.2).--
- 152. (New) The method of any of claim 147, 148, 149 or 150, wherein the human Y4 receptor is encoded by a nucleic acid sequence identical to the receptor-encoding nucleic acid sequence contained in plasmid pcEXV-Y4 (ATCC Accession No. 75631).--
- 153. (New) The method of any of claim 147, 148, 149 or 150, wherein the composition is a pharmaceutical composition and the carrier is a pharmaceutically acceptable carrier.--

REMARKS

Claims 1-146 were pending in the subject application. By this Amendment applicants have canceled claims 1-146 without prejudice and added new claims 147-153. Accordingly, upon entry of this Amendment, claims 147-153 will be pending and under examination.

By this Amendment, applicants have amended the specification to recite the continuing data for the above-identified application. The specification has also been amended to include the reference to Sequence Identification Numbers (SEQ ID NOS:).

The specification has also been amended on page 64, line 4 of Table 2, to correct an obvious typographical error. The term "human PPY" has been deleted and the term "human PYY" has been inserted therein. Support for this amendment may be found inter alia in the specification, as originally-filed, on page 57, line 11, which recites, "human PYY ($K_i = 0.62$ nM)".

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Furthermore, the specification has been amended to include the appropriate ATCC Accession numbers. Applicants attach hereto as **Exhibit C** a copy of the ATCC Budapest Treaty Deposit Receipt for plasmid pcEXV-rY4, cell line N-hY4-5, and cell line L-hY4-3.

Applicants, therefore, maintain that the amendments herein to the specification and the claims do not raise any issue of new matter and respectfully request that this Amendment be entered.

By this Amendment, applicants submit a paper copy and computer readable copy of the nucleotide and/or amino acid sequences disclosed in the application in order to fulfill the requirements of 37 C.F.R. §1.821 through 1.825 in connection with this application. Applicants submit herewith twenty two (22) pages of Sequence Listing, numbered 94-115, in compliance with the requirements of §1.821 through 1.825, attached hereto as **Exhibit A**.

Applicants also submit herewith a formatted Sequence Listing in a computer readable form which complies with the requirements of 37 C.F.R. §1.824. In addition, applicants submit a Statement in Accordance with 37 C.F.R. §1.821(f), attached hereto as **Exhibit B**, certifying that the computer readable form containing the nucleic acid and/or amino acid sequences as required by 37 C.F.R. §1.821(e) contains the same information which is submitted as "Sequence Listing".

Applicants maintain that new claims 147-153 raise no issue of new matter. Support for new claim 147 may be found inter alia in the specification, as originally-filed, at page 5, lines 25-32; page 10, lines 24-34; and page 21, line 8 through page 22, line 11. Support for new claim 148 may be found inter alia in the specification, as originally-filed, at page 6, lines 17-23; and page 25, lines 19-37.

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Support for new claims 149 and 150 may be found inter alia in the specification, as originally-filed, at page 5, line 34 through page 6, line 15; and page 22, line 13 through page 23, line 27. Support for new claim 151 may be found inter alia in the specification, as originally-filed, at page 17, lines 9-18.

Support for new claim 152 may be found inter alia in the specification, as originally-filed, at page 19, lines 26-33. Support for new claim 153 may be found inter alia in the specification, as originally-filed, at page 28, lines 1-8; and page 40, line 10 through page 41, line 1. Accordingly, applicants respectfully request that the Amendment be entered.

Information Disclosure Statement

In accordance with their duty of disclosure under 37 C.F.R. §1.56, applicants would like to direct the Examiner's attention the following references which are listed on the attached Form PTO-1449 (**Exhibit 1**) and which were previously cited in connection with the prosecution of U.S. Serial No. 08/176,412, PCT International Application No. PCT/US94/14436 and U.S. Serial No. 08/495,695 from which the subject application claims benefit under 35 U.S.C. §120. According to 37 C.F.R. §1.98(d), copies of patents or publications that were previously cited by, or submitted to, the Office in connection with such prior applications need not accompany the Information Disclosure Statement. Accordingly, copies of the following references are not attached to this Information Disclosure Statement:

1. U.S. Patent No. 4,839,343, issued June 13, 1989, Waeber, et al.;

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2. U.S. Patent No. 5,026,685, issued June 25, 1991, Boublik, J.H., et al.;
3. U.S. Patent No. 5,053,337, issued October 1, 1991, Weinshank, R., et al.;
4. U.S. Patent No. 5,328,899, issued July 12, 1994, Boublik, J.H., et al.;
5. U.S. Patent No. 5,506,258, issued April 9, 1996, Christophe, B., et al.;
6. U.S. Patent No. 5,571,695, issued November 5, 1996, Selbie, L., et al.;
7. U.S. Patent No. 5,602,024, issued February 11, 1997, Gerald, C., et al.;
8. PCT International Application No. WO 92/00079, published January 9, 1992;
9. PCT International Application No. WO 93/09227, published May 13, 1993;
10. PCT International Application No. WO 93/24515, published December 9, 1993;
11. PCT International Application No. WO 94/00486, published January 6, 1994;
12. PCT International Application No. WO 94/22467, published October 13, 1994;

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13. PCT International Application No. WO 95/00161, published January 5, 1995;
14. PCT International Application No. WO 96/14331, published May 17, 1996;
15. PCT International Application No. WO 96/23809, published August 8, 1996;
16. PCT International Application No. WO 97/17440, published May 15, 1997;
17. PCT International Application No. WO 97/48406, published December 24, 1997;
18. PCT International Application No. WO 97/37998, published October 16, 1997;
19. Canadian Patent Application No. 2 037 433, published October 1, 1991;
20. Canadian Patent Application No. 2 134 428, published October 26, 1994;
21. Japanese Patent Application No. 6 116 284, published April 26, 1994;
22. European Patent Application No. 0 355 793, published February 28, 1990;
23. European Patent Application No. 0 355 794, published February 28, 1990;

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24. European Patent Application No. 0 356,021, published February 28, 1990;
25. Bard, J. A., et al., "Cloning and Functional Expression of a Human Y4 Subtype Receptor For Pancreatic Polypeptide, Neuropeptide Y, and Peptide YY," J. Biol. Chem. (1995) **270(45)**: 26762-26765;
26. Doughty, M. B., et al. "Benextramine-Neuropeptide Y Receptor Interactions: Contribution of the Benzylic Moieties to [³H] Neuropeptide Y Displacement Activity," J. Med. Chem. (1993) **36(2)**: 272-279;
27. Gehlert, D.R., "Subtypes of Receptors for Neuropeptide Y: Implications for the Targeting of Therapeutics," Life Science (1994) **55(8)**: 551-562;
28. George, S.T., et al., "High-Efficiency Expression of Mammalian β -Adrenergic Receptor in Baculovirus-Infected Insect Cells," Biochemical and Biophysical Research Communications (1989) **163(3)**: 1265-1269;
29. Gerald, C., et al., "A Receptor Subtype Involved in Neuropeptide-Y-Induced Food Intake," Nature (1996) **382**: 168-171;
30. Gilbert, W., et al., "Characterization of Specific Pancreatic Polypeptide Receptors on Basolateral Membranes of the Canine Small Intestine," PNAS (1988) **85**: 4745-4749;
31. Goadsby, P. J. and Edvinsson, L., "Examination of the Involvement of Neuropeptide Y (NPY) in Cerebral Autoregulation Using the Novel NPY Antagonist PP56,"

Neuropeptides (1993), **24(1)**: 27-33;

32. Herzog, et al. "Cloned Human Neuropeptide Y Receptor Couples to Two Different Second Messenger Systems," PNAS (1992) **89(13)**: 5794-5798;
33. Hu, Y., et al., "Identification of a Novel Hypothalamic Neuropeptide Y Receptor Associated With Feeding Behavior," Journal of Biological Chemistry (1996) **271(42)**: 26315-26319;
34. Jorgensen, J. Ch., et al., "Structure-Function Studies on Neuropeptide Y and Pancreatic Polypeptide-Evidence for Two PP-Fold Receptors in Vas Deferens," Eur. J. Pharm. (1990) **186**: 105-114;
35. Kotz, C. M., et al., "The Effect of Norbinaltorphimine, β -Funaltrexamine and Naltrindole on NPY-Induced Feeding," Brain Research (1993) **631**: 325-328;
36. Krause, J., et al., "Neuropeptide Y1 Subtype Pharmacology of a Recombinantly Expressed Neuropeptide Receptor," Mol. Pharm. (1992) **41**: 817-821;
37. Larhammar, et al., "Cloning and Functional Expression of a Human Neuropeptide Y/Peptide YY Receptor of the Y1 Type," The Journal of Biological Chemistry (1992) **267(16)**: 10935-10938;
38. Leibowitz, S. F., et al., "Blockade of Natural and Neuropeptide Y-Induced Carbohydrate Feeding By a Receptor Antagonist PYX-2," NeuroReport (1992) **3(11)**: 1023-1026;
39. Lundberg, et al., "Comparative Immunohistochemical and

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Biochemical Analysis of Pancreatic Polypeptide-Like Peptides with Special Reference to Presence of Neuropeptide Y in Central and Peripheral Neurons," The Journal of Neuroscience (1984) 4(9): 2376-2386;

40. Patent Abstracts of Japan (1992) 16(265): Abstract No. C-0951, corresponding to Japanese Patent Application No. 4 063 594, published February 28, 1992;
41. Schwartz, T. W., et al., "Receptors on Phaeochromocytoma Cells For Two Members of the PP-Fold Family-NPY and PP," FEBS Letters (1987) 225(1): 209-214;
42. Vander, A. J., et al., Human Physiology, McGraw-Hill Publishing Co., (1990) pages 207-210;
43. Wahlestedt, C., et al., "Neuropeptide Y-Related Peptides and Their Receptors- Are the Receptors Potential Therapeutic Drug Targets?" Annu. Rev. Pharmacol. Toxicol. (1993) 32: 309-352;
44. Wahlestedt, C., et al., "Identification of Cultured Cells Selectively Expressing Y1-, Y2-, or Y3-Type Receptors for Neuropeptide Y/Peptide YY," Life Sciences (1991) 50: PL7-PL12;
45. Wahlestedt, C., et al., "Neuropeptide Y Receptor Subtypes, Y1 and Y2," Annals of the New York Academy of Sciences (1990) 611: 7-26;
46. Weinberg, D. H., et al., "Cloning and Expression of a Novel Neuropeptide Y Receptor," J. Biol. Chem. (1996) 271(28): 16435-16438; and

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47. Whitcomb, D. C., et al., "Characterization of Saturable Binding Sites For Circulating Pancreatic Polypeptide in Rat Brain," Am. J. Physiol. (1990) **259**: G687-G691.

The subject application is a continuation application of the US National Stage application corresponding to PCT International Application No. PCT/US94/14436, filed December 28, 1994. A copy of the International Search Report that was issued in connection with PCT International Application No. PCT/US94/14436 is attached hereto as **Exhibit 2**.

A Supplementary European Search Report was issued January 7, 1997 in connection with European Patent Application No. 95907215.8. European Patent Application No. 95907215.8 is the European national stage application of PCT/US94/14436. A copy of the Supplementary European Search Report is attached hereto as **Exhibit 3**.

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone the number provided.

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No additional fee, other than the enclosed fee of \$1,098.00 for filing the subject application, is believed necessary in connection with the filing of this Amendment. Specifically, no fee is deemed necessary in connection with the filing of the Information Disclosure Statement. However, if any fee is required, authorization is hereby given to charge the amount of such fee to Deposit Account No. 03-3125.

Respectfully submitted,



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